

538,629

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

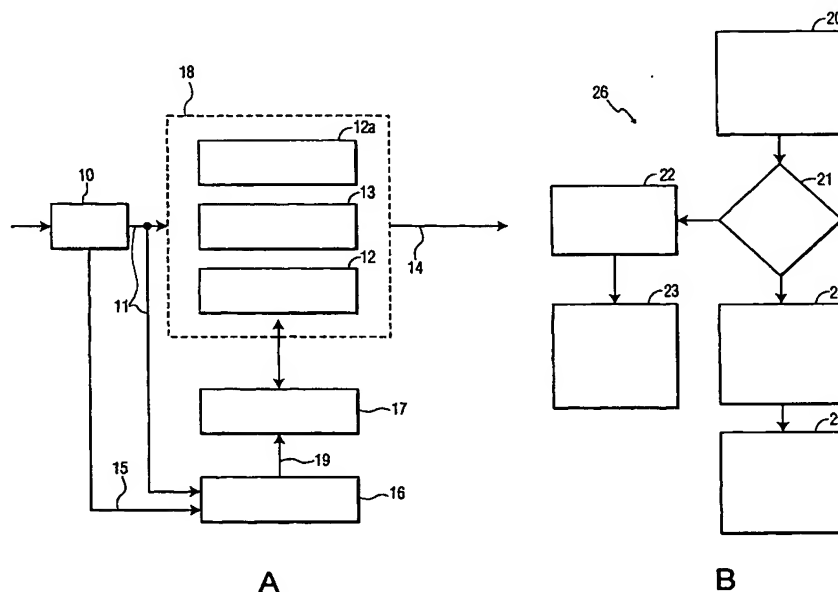
PCT

(10) International Publication Number
WO 2004/054269 A1

- (51) International Patent Classification⁷: **H04N 7/30**, (74) Common Representative: **KONINKLIJKE PHILIPS ELECTRONICS N.V.**; c/o Goodman, Edward W., P.O. Box 3001, Briarcliff Manor, NY 10510-8001 (US).
G06T 5/20, H04N 7/26
- (21) International Application Number: **PCT/IB2003/005536**
- (22) International Filing Date:
28 November 2003 (28.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/432,301 10 December 2002 (10.12.2002) US
- (71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BOROCZKY, Lilla** [US/US]; P.O. Box 3001, Briarcliff Manor, NY 10510-8001 (US). **YANG, Yibin** [US/US]; P.O. Box 3001, Briarcliff Manor, NY 10510-8001 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:**
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations

[Continued on next page]

(54) Title: JOINT RESOLUTION OR SHARPNESS ENHANCEMENT AND ARTIFACT REDUCTION FOR CODED DIGITAL VIDEO



(57) **Abstract:** The present application is a new approach for jointly controlling resolution or sharpness enhancement and artifact reduction in order to improve picture quality for coded digital video. The present application provides a joint control that is based on a metric, the metric being used to determine which pixel and by how much it is to be enhanced and to determine on which pixel and to what degree to carry out the artifact reduction.

WO 2004/054269 A1



Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.